XOHM Modem User Guide
MAX-206M2 by ZyXEL

7/25/08

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Welcome to XOHM

XOHM is a wireless Internet service that lets you get online at broadband speed. The XOHM WiMAX network connects you to the people you need, the entertainment you love and the information you can't live without. You'll connect to the Internet using your choice of computer without long-term contracts or complications.

Getting started with XOHM is simple: just connect your **XOHM Modem MAX-206M2 by ZyXEL** (XOHM Modem) to your computer and set up your XOHM account, and you've got broadband.

This guide covers all the information required to set up, install, and configure your XOHM Modem.

- *Get Started*

- *Your XOHM Modem Settings*

- *Troubleshooting*

- *User Information and Warranty*

For more information about XOHM WiMAX, visit *www.xohm.com*.

Get Started

XOHM™

WiMAX

Your XOHM Modem

This section outlines the basic layout of your modem and connections.

What's in the Box

- *XOHM Modem MAX-206M2 by ZyXEL*
- *Power adapter*
- *Ethernet cable*
- *XOHM Modem Setup Assistant CD*
- *Get Started Guide*
- *User Guide*

Before setting up your XOHM Modem, make sure you have all the items listed above. If any items are missing, contact your XOHM retailer or call *XOHM Care* at *877-333-XOHM* (877-333-9646).

Modem Requirements

- CD-ROM drive (for XOHM Modem Setup Assistant only)
- 32MB RAM minimum (64MB recommended)
- 20MB available hard disk space
- One available 10/100Mbps Ethernet port
- Web browser (XOHM Modem is compatible with Internet Explorer 6 and higher, Firefox 1.5 and higher, and Safari 2.0. It may also function with other browsers.)
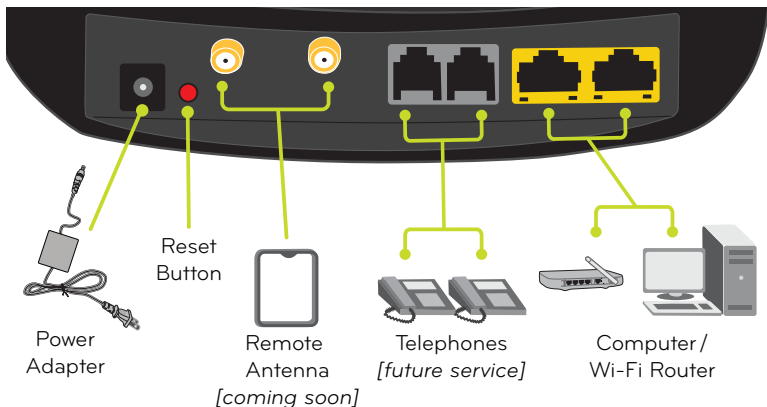- Credit card for activation

Get to Know Your Device

Your XOHM Modem lets you connect to the XOHM WiMAX network to provide fast and easy wireless connectivity to the Internet in your home or office.

WiMAX Overview

WiMAX Tower

Internet

XOHM Modem
MAX-206M2 by ZyXEL

Computer or
Home Network

Telephones
[future service]

Device Connectors (back of device)

Reset Button

Power Adapter

Remote Antenna *[coming soon]*

Telephones *[future service]*

Computer / Wi-Fi Router

1. *Power jack (black):* Connects the power adapter to power the modem.

2. *Reset button (red):* Resets the unit back to factory defaults (use ONLY as a last resort).

3. *Antenna connectors (gold):* Connect a remote antenna (available separately) to extend a signal from a strong area (such as near a window) to a weaker area where it may be more convenient to place the modem. *[Coming soon.]*

4. *Phone ports 1 / 2 (gray):* Connect telephones to the modem. *[Future service.]*

5. *Ethernet ports 1/2 (yellow):* Connects the modem to computers and/or a Wi-Fi router.

Modem LED Display (front panel)

WiMAX Signal | Signal Strength Indicator | Phone 1 & 2 *[future service]* | LAN 1 & 2 | Power
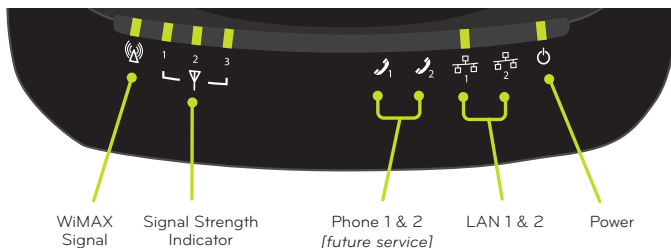
1. **WiMAX LEDs:** The leftmost LED indicates WiMAX connectivity. A blinking LED indicates that the unit is ranging, while a solid LED indicates that a connection has been established and that the modem is ready to transmit and receive. The three LEDs to the right indicate the signal strength of the reception (1-3). These LEDs will be green when illuminated.

Note	**Signal Strength LEDs:** *The number of signal strength LEDs illuminated reflects the strength of the WiMAX signal being received by the XOHM Modem; however, the strength of signal does not affect the speed of your connection. As long as there is sufficient signal strength to make a connection, you may achieve maximum connection speed. (For more information about signal strength, see "XOHM WiMAX Signal Strength" on page 20.)*

2. **Phone 1 / Phone 2 LEDs:** Illuminates when the VoIP phone "line" is in use. If no voice accounts are configured, the LED will be off. If a voice account is configured and registered, the LED will be green. When the connected phone is off-hook, the LED will blink. When there is new voicemail on the account, the LED will be amber (optional). *[Future service.]*

3. **LAN 1 / LAN 2 LEDs:** Illuminates when the modem is connected to the computers or other networking devices. This LED will be green, and will flash as data is sent through the connection.

4. **Power LED:** Indicates if the unit has power and is operating correctly. A blinking LED indicates the unit is loading the firmware and configuration, while a solid LED indicates the unit is ready for operation. This LED will be green.

Positioning Your Modem

Your XOHM Modem has a convenient, contemporary design that allows for simple setup. When setting up your modem:

● Only use your XOHM Modem indoors. Avoid moisture or extreme temperatures.

● For improved reception, place the modem near a closed window.

● Position the modem within easy access of a reliable power supply.

● Make sure the modem is near enough to your computer to easily connect the modem to the computer using the supplied Ethernet cable.

● The unit's omnidirectional antennas are built into the sides ("handles") of the modem case. Make sure to provide ample space around the device to ensure maximum WiMAX signals.

● *The antennas must be installed to provide a separation distance of at least 20cm from all persons to satisfy Federal Communications Commission radio frequency exposure compliance.*

● Where possible, keep your modem at least one foot away from other electronic devices, such as Wi-Fi routers and cordless phones, to avoid potential signal interference.

5dBi Omnidirectional Antennas

| Note | **Accessories:** *Various accessories for your device, such as remote antennas and battery packs, will be available from XOHM in the future. Please visit* **www.xohm.com** *for details and updates.* |

Section 1B

Install Your XOHM Modem Using the XOHM Modem Setup Assistant

This section outlines the basic steps to install your modem using the ***XOHM Modem Setup Assistant*** included on the XOHM Modem Setup Assistant CD that came with your modem.

Note	*You can set up your modem without running the XOHM Modem Setup Assistant, but we recommend that you use the setup assistant for the sake of simplicity and to facilitate future updates and diagnostics.*

Install the XOHM Modem Setup Assistant

1. Insert the ***XOHM Modem Setup Assistant*** CD into your computer's CD drive.

   - The installation should begin automatically. If your computer does not launch the installation program, click ***Start > My Computer*** and double-click on the ***CD Drive***. From the CD drive file list, click ***XOHM Modem Setup Assistant.exe*** to begin the installation.
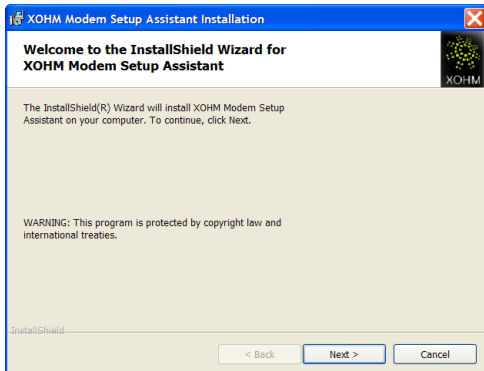
Note	*Depending on your system settings, you may be required to log in as an administrator to install software on your computer.*
	The screen images in this user guide are illustrative and may not reflect the final software.

**2.** From the XOHM Modem Setup Assistant *Welcome* screen, click *Next*.

3. Follow the onscreen instructions to complete the installation wizard.

- Accept the terms of the XOHM License Agreement.
  - If you do not agree with the terms, click *Cancel*. Your installation will be cancelled and the program will exit.
- Select a destination folder for the program. (Default is C:\Program Files\XOHM\ Modem Setup Assistant.)
- Click *Install* at the "Ready to Install the Program" prompt.
- When the *Completed* screen appears, select *Launch XOHM Modem Setup Assistant* and click *Finish* to complete the installation and launch the setup program.

Note	*If your computer has a current Internet connection, the program will automatically check for a software update. If the* New Software Found *screen is displayed, click* Next *and follow the onscreen instructions to update the XOHM Modem Setup Assistant software.*

Install Your XOHM Modem

1. If it did not launch automatically, launch the XOHM Modem Setup Assistant by clicking **Start > (All) Programs > XOHM > XOHM Modem Setup Assistant**. The **Welcome** screen appears.
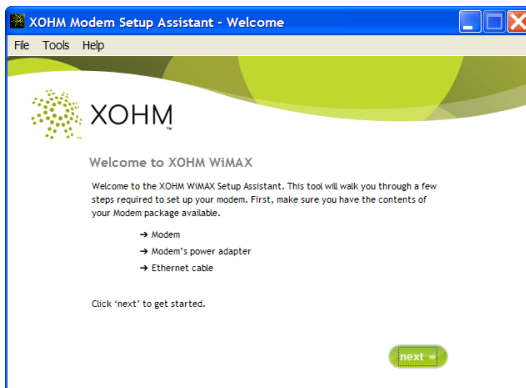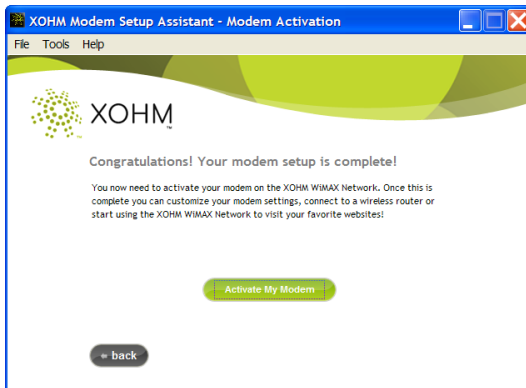

2. Follow the onscreen instructions to install your modem.
   - Insert the round end of the power adapter into the modem's power port and plug the other end into a power source. (The Power LED should illuminate.)
   - Insert one end of the supplied Ethernet cable to your computer and the other end into the yellow **LAN 1** port. (The LAN 1 LED should illuminate.)

3. Use the Modem Setup Assistant to check your XOHM signal strength. It may take a few moments for the signal to find your modem.

- If the setup assistant displays any green circles (⦿, ⦿, or ⦿), you're in fine shape. Click **Next** and proceed to step 7.

- If you do not have any green circles showing (⦿), or if you would like to look for a stronger signal, try moving the modem to a different location (nearer a window, on a higher floor, or away from other electronic devices; for tips on locating your modem, follow the onscreen instructions or see "Positioning Your Modem" on page 6). Wait several seconds at each location and click **Test** to see if you're getting a signal.

- If you cannot acquire a WiMAX signal, call **XOHM Care** at **877-333-XOHM** (9646).

Signal
Strength

4. Click ***Activate My Modem*** to connect to the XOHM activation site.

Your Web browser will launch and you will see an ***Activation in Progress*** screen. When the XOHM site opens, follow the instructions to explore the XOHM service options, choose the option that's right for you, and activate XOHM. When complete, submit your order.

5. Wait for activation and provisioning to complete. (Activation by XOHM is typically fast but may take several minutes.)

- During activation and provisioning, make sure that you do not disconnect your modem. Disconnecting will interrupt the process.

- When activation and provisioning have been completed, the ***Activation Complete*** screen appears. The modem will disconnect and reconnect automatically and the modem indicator lights (LEDs) will turn off and on in sequence (Power, LAN, and Signal Strength).

6. To use Modem Setup Assistant to help you set up a wireless network, click
Yes, Help Me Set Up My Router. (Go to "Set Up a Router (optional)" on page 14.)

– or –

If you are not setting up a wireless network, click ***No, I Will Not Use a Wireless Router***.
You will proceed to the ***Setup Complete*** screen, where you can:

- Click ***Visit XOHM*** to go to the XOHM website to explore additional XOHM
  features and personalize your XOHM WiMAX service.

  – or –

- Click ***Finish*** to complete activation.

If activation is unsuccessful or if the operation times out, click Retry to retry.
If activation is still unsuccessful, refer to the ***Troubleshooting*** information on
page 40 for possible solutions. If none of those addresses the problem, call
***XOHM Care*** at ***1-877-333-XOHM*** (9646) for assistance.

Once the ***Setup Complete*** screen has been displayed, your modem setup is complete.
Click ***Finish*** and then launch your browser to surf the Web, check your email, and more,
all with the speed and reliability of the XOHM WiMAX network.
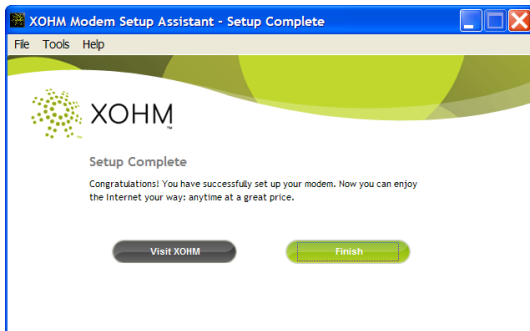
Set Up a Router (optional)

If you want to set up a wireless router, the XOHM Modem Setup Assistant will take you through a basic router setup and connection test. For advanced router configuration, consult your router's documentation.

1. From the *Activation Complete* screen (see step 6 above), click *Yes, Help Me Set Up My Wireless Router*.
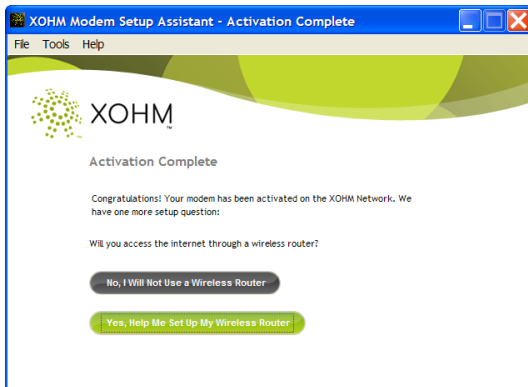
2. Follow the instructions to connect your router to the modem and test your connection.

3. When you have successfully set up your router, *Setup Complete* is displayed.
   - Click *Visit XOHM* to go to the XOHM website to explore additional XOHM features and personalize your XOHM WiMAX service.

     – or –

     Click *Finish* to complete activation.

Using the XOHM Modem Setup Assistant After Installation

Once your modem is activated, you can use the *XOHM Modem Setup Assistant* program to access information about and links to online support and settings for your XOHM Modem.

▶ Click *Start > (All) Programs > XOHM > Modem Setup Assistant* or double-click on the XOHM Modem Setup Assistant icon (🖼)on your computer's desktop to launch XOHM Modem Setup Assistant. The XOHM Modem Setup Assistant *Current Status* screen appears (see below).

The XOHM Modem Setup Assistant Current Status Screen
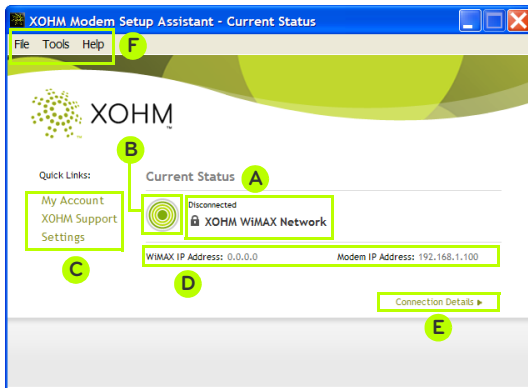
This screen provides the following information and tools:

A Connection Status and Network Information.

B Signal Strength (see "XOHM WiMAX Signal Strength" on page 20).

C Quick Links:

- **My Account** takes you to your online XOHM account page.
- **XOHM Support** launches the XOHM Support website.
- **Settings** launches your online modem settings tool, the Modem Configuration Interface. See "Modem Configuration Interface Overview" on page 28 for more information.

D General Information (WiMAX IP Address and Modem IP Address.

E Link to the **Connection Details** screen of the XOHM Modem Setup Assistant.

F Menu Bar:

- **File > Exit** exits the XOHM Modem Setup Assistant.
- **Tools** provides links to the XOHM coverage map and the XOHM speed test site. Selecting **Tools > Options** displays a window that lets you select software update options.
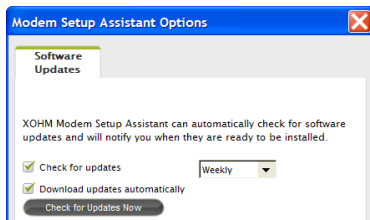
- **Help** lets you link to an online help file with a Modem Setup Assistant user guide (**Modem Setup Assistant Help**) and display the XOHM Modem Setup Assistant version information (**About XOHM Modem Setup Assistant**).

### *The XOHM Modem Setup Assistant Connection Details Screen*

▶ Click **Connection Details** from the Current Status screen to display the XOHM Modem Setup Assistant Connection Details screen.
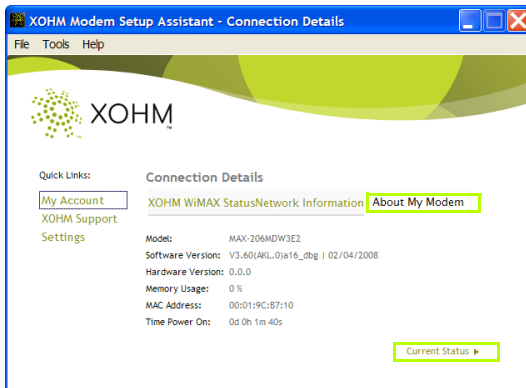

Connection Details – XOHM WiMAX Status

- Click **XOHM WiMAX Status** (see above) to display your current XOHM status, including network name, signal strength, Ethernet 1 and 2 connections, and phone line information *(future use)*.

- Click **Network Information** (see below) to display network and connection details including modem and WiMAX IP addresses, LAN IP subnet, packet error rate, base station ID, frequency, data transmission and reception estimates, transmit power, and connection duration.
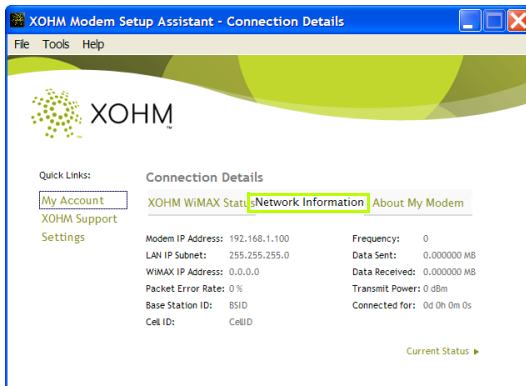
Connection Details – Network Information

- Click **About My Modem** (see below) to display information about your XOHM Modem, including model number, software and hardware versions, memory usage, MAC Address, and the modem uptime.

Connection Details – About My Modem

▶ Click **Current Status** from any of the Connection Details pages to return to the Current Status screen.

XOHM WiMAX Signal Strength

Signal Strength	Modem Signal Strength Indicator LEDs	Modem Setup Assistant Signal Strength Icons	Description of the Signal Strength Level
Inactive > -90dBm	No lights		Your connection to the XOHM network is currently weak. This can probably be solved by placing your modem in a better location. Once moved, please test your signal again.
Adequate > -80dBm to > -90dBm	1 light		You have an adequate WiMAX signal, but it could probably be improved. Try placing your modem closer to a closed window and test your signal again.
Good > -70dBm to > -80 dBm	2 lights		You have a strong connection to the XOHM network. You can experiment with modem placement if desired.
Best > -70dBm	3 lights		You have the best possible WiMAX connection.

# *Alternate Method: Install Without the Modem Setup Assistant*

If you do not wish to use the XOHM Modem Setup Assistant to set up your XOHM Modem, you may set it up using the configuration interface.

Note | *Although you may set up your modem without using the XOHM Modem Setup Assistant, we recommend that you use the setup assistant for the sake of simplicity and to facilitate future updates and diagnostics through the XOHM Modem Setup Assistant.*

Set Up the Modem

1. Find a place for your XOHM Modem. See "Positioning Your Modem" on page 6 for details and suggestions.
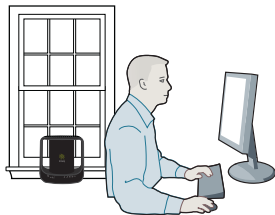
2. Disconnect any existing LAN (Ethernet) connections or routers from the computer you are going to be using for your XOHM Modem. (Router setup will come later.)

Installation: Without Setup Assistant

3. Plug in the modem and connect it to your computer.

   - Insert the round end of the power adapter into the modem's power port and plug the other end into a power source. (The Power LED should illuminate.)

   - Insert one end of the supplied Ethernet cable to your computer and the other end into the yellow **LAN 1** port. (The LAN 1 LED should illuminate.)

4. Check the modem's indicator lights to confirm your WiMAX signal. It may take a few moments for the signal to find your modem.

   - If the **WiMAX Signal** indicator is solid green, the modem is receiving a WiMAX signal. Proceed to step 5.

   - If the **WiMAX Signal** indicator is blinking, try moving the modem to a different location (nearer a window or away from other electronics). Wait several seconds at each location to see if you're getting a signal.

   - If you cannot acquire a WiMAX signal, call **XOHM Care** at **877-333-XOHM** (9646).

WiMAX Signal · LAN 1 · Power

| Tip | For more information about signal strength, see "XOHM WiMAX Signal Strength" on page 20. |

5. Launch your Web browser.

  - The XOHM website will be displayed.

  - Follow the onscreen instructions to choose your XOHM service option and activate XOHM. When complete, submit your order.

6. Wait for activation and provisioning to complete. (Activation by XOHM is typically fast but may take several minutes.)

  - During activation and provisioning, make sure that you do not disconnect your modem. Disconnecting will interrupt the process.

  - Your XOHM Modem will automatically power cycle (turn off and back on) during provisioning. When the *WiMAX Signal* indicator returns to solid green, your modem is active and ready to use.

7. To confirm your modem's status, navigate to your favorite website. If you are able to access the XOHM site but no other website, provisioning may not be complete. Wait a few minutes and try again.

Connect a Router (optional)

Once you have set up your XOHM Modem and confirmed your Web connection, you can set up your router as needed.

1. Consult your router's documentation for setup details.

2. Disconnect the Ethernet cable from your computer and connect it to the router's *Internet* port. (It will go directly from the XOHM Modem's LAN 1 port to the router.)

Note | *Maintain a minimum distance of 1 foot between the XOHM Modem and your Wi-Fi router to avoid signal interference.*

3. Connect an Ethernet cable from the router to your computer.

4. Make sure the modem's *LAN 1* indicator is illuminated and test connectivity by launching the Web browser. If you are having difficulties, double-check your router's settings.
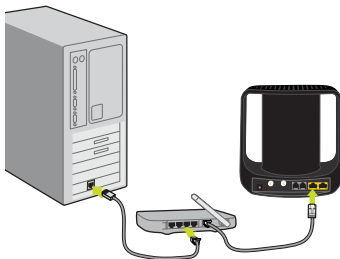
Tip | *For added security, change your modem password after setting up your router. See "Access the Modem Configuration Interface" on page 28 for more information.*

Telephone (VoIP) Settings

Your XOHM Modem is able to support VoIP (Voice over Internet Protocol) telephony, meaning you will be able to use your XOHM WiMAX connection to provide both voice and Internet services.

Coming soon: Telephone and voice (VoIP) service from XOHM will be available in the future.
Visit *www.xohm.com* frequently for details and announcements.

Your XOHM Modem Settings

Modem Configuration Interface Overview

This section reviews all the basic settings options available through the XOHM configuration interface.
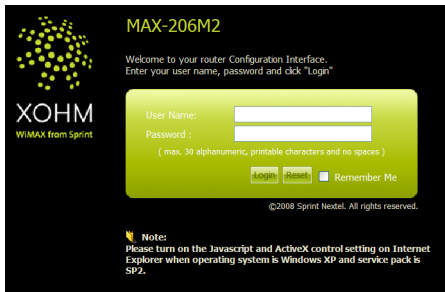
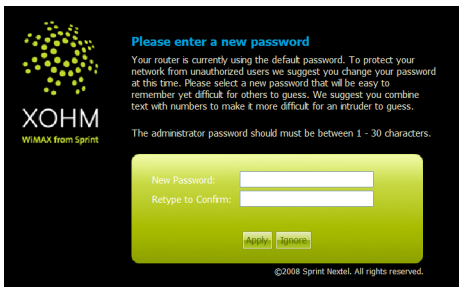| *Note*	*The settings available through the Configuration Interface may also be accessed online through the* **Settings** *link in the XOHM Modem Setup Assistant.*
	The screen images in this user guide are illustrative and may not reflect the final software.

Access the Modem Configuration Interface

1. Open the computer's Web browser, type *http://192.168.100.1* in the address bar, and press *Enter*. The Configuration Interface login screen will be displayed.

2. Enter the User Name, enter *1234* in the Password field, and then click *Login*.
   - The default User Name is *user*. The default password is *1234*.
3. You may be prompted to enter a new password.

- To keep using the default password, click *Ignore* or *Clear* and continue to the next steps.
- To change the password, enter and retype a new password and click *Apply* to change the password. You will need to complete step 2 again to log in with your new password before continuing.

4. The configuration interface Home screen appears.

Menu Bar   Home Area Icons
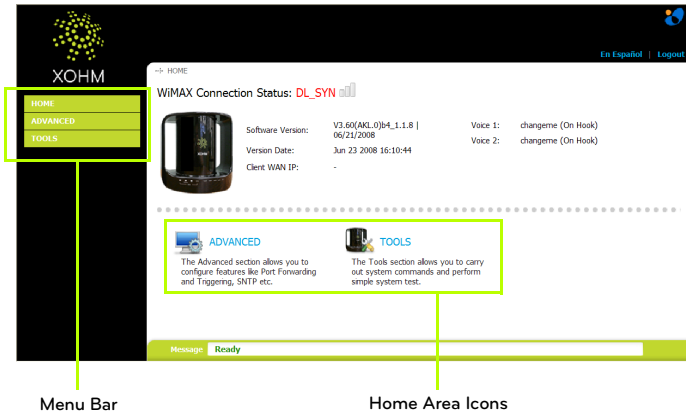
5. From the Home screen, access your settings options either through the Home area icons in the middle of the window or through the menu bar options on the left side of the window.

While it's a good idea to familiarize yourself with these menus and options, rest assured that you may never need to use any of them. Your XOHM Modem's initial setup, detailed in section 1, is designed to automatically detect and assign the correct settings for the majority of installations.

Menu Options

The menu bar and the Home area icons offer the same options. The only difference is that the menu bar includes an option to return to the Home screen.

The options available include:

- *Advanced* – includes tabs for *Port Forwarding* and *Trigger Port*.

- *Tools* – includes tabs for *Password Setup*, *Remote Access*, and *Software Update*.

Using the Menus

The settings menus use just a few simple tools to help you make changes.

- Most of the menus allow you to enter or change values directly. If you're satisfied with the changes, click *Apply* at the bottom of the screen to save your settings. To cancel your changes, click *Cancel*.

Apply | Cancel
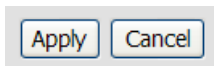
- Many settings options allow you to choose from drop-down lists. Click on the arrow and select an option.

None
None
Both
In Only
Out Only
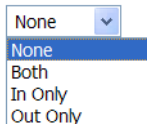
- Certain menus contain lists that allow you to edit, delete, or export settings. In these cases you will highlight a line and click on the action you want to take: *Edit* (📝), *Delete* (🗑), or *Export* (📤).

Advanced Menu

This section reviews all the settings options available through the menu bar's *Advanced* menu.

Display the Advanced Menu

1. From the Home screen (see "Access the Modem Configuration Interface" on page 28), click *Advanced* in the menu bar on the left side of the screen to expand the Advanced menu.

2. Click *Port Forwarding* or *Trigger Port* to display the corresponding menu.

Port Forwarding

The Port Forwarding menu lets you forward outside ports to inside devices so that users from the Internet can use shared resources such as Web servers, remote workstations, gaming platforms, etc.
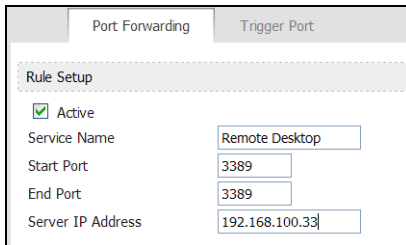
Note	*Port forwarding does NOT apply to normal browsing or downloading by users behind the modem, and no additional settings are needed for those functions on this menu.*

There are 11 configurable rules and one "Default Rule." When the modem receives an unsolicited packet from the Internet, it will first look at rules 1-11 to see if the traffic's port matches a rule. If not, the modem will see if a Default Server is present, and if so, pass the packet to the Default Server. If no Default Server exists, the traffic is dropped.

The modem can use one port or a port range for forwarding traffic, depending on which port(s) the application being forwarded uses. If only one port is needed, the Start and End ports should be set to the same value.

Port forwarding entries can be edited by clicking on the *Edit* (☑) icon in the Action column. You can also use the *Delete* (🗑) icon to remove a port forwarding rule.

In the screenshot below, a user has Windows Remote Desktop set up on his computer, which is assigned IP address 192.168.100.33. Rule 1 is Edited (opening the Edit menu for the rule) and set to Active. A Service Name is given to it for reference. The Start and End Ports specified at port 3389, the default communication port for Remote Desktop. Finally, the Server IP Address of the computer is specified. Now, the user can access their Remote Desktop from the Internet, so long as they know the WAN (public) IP or DNS address that the modem is using.

Trigger Port

The **Trigger Port** allows you to configure up to 12 "trigger" ports that can open and close as necessary, instead of being always open.

Tools Menu

This section reviews all the settings options available through the menu bar's **Tools** menu, including password setup, remote access, and software update.

Display the Tools Menu
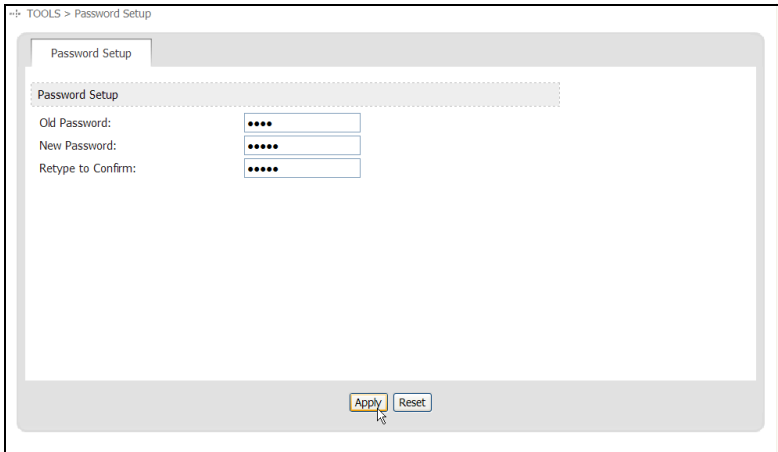
1. From the Home screen (see "Access the Modem Configuration Interface" on page 28), click **Tools** in the menu bar on the left side of the screen to expand the Tools menu.
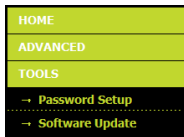
2. Select **Password Setup** or **Software Update** to display the corresponding menu.

Password Setup

The *Password Setup* screen lets you reset your XOHM Modem password.

Enter your old password, and then enter and reenter the new password. Click *Apply* to save the new password.

Software Update

The **Software Update** tool lets you update your XOHM Modem software.

Important	Only upload software updates provided by XOHM Care, and only after instructed to do so by XOHM Care. *Uploading unapproved software may damage your modem.*

1. When instructed to do so, download a software update from the XOHM website. (If the file is compressed [zipped], you will need to extract it.)

2. From the Software Update screen, click **Browse**, select the update binary (.BIN) file, and click **Upload** to update your software. Some updates may require you to reconfigure your modem.

Troubleshooting

XOHM™

WiMAX

Section 3A

Troubleshooting

This section addresses common problems and solutions for use with your XOHM Modem. For more information, visit *www.xohm.com*.

Frequently Asked Questions

System

What are the minimum system requirements to be able to run the XOHM Modem, MAX-206M2 by ZyXEL?

The minimum system requirements are:
- 32MB RAM (64MB recommended)
- 20MB available hard disk space
- Available 10/100Mbps Ethernet port
- Web browser: XOHM Internet service has been tested with Internet Explorer 6 and 7, Firefox 1.5 and 2.0, and Safari 2.0. Other browsers may also be compatible.

What operating systems are supported?

The XOHM Modem is designed to support any current operating system.

Can I use the XOHM Modem with my Wi-Fi router?

Yes. Most commercially available Wi-Fi routers can be connected to the XOHM Modem. For information about connecting a router, see "Set Up a Router (optional)" on page 14 for XOHM Modem Setup Assistant setup or "Connect a Router (optional)" on page 24 for setup without the XOHM Modem Setup Assistant.

Issues

My XOHM Modem is not working (lights are not coming on). What do I do?

- Make sure the modem's power adapter is plugged into an active power outlet.
- If you are using a power strip or surge protector, make sure its switch is in the "ON" position.
- Make sure the round end of the power adapter is firmly connected to the modem's power jack.
- Make sure you are using the power adapter that came with your modem. The correct adapter for the MAX-206M2 provides output power of 12V AC at 1 Amp.
- If you still see no lights, call *XOHM Care* at *877-333-XOHM* (9646).

WiMAX Signal   Signal Strength Indicator   Phone 1 & 2 *[future service]*   LAN 1 & 2   Power
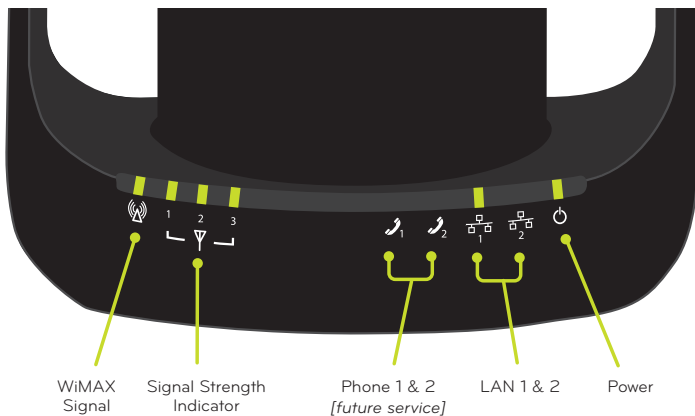
My XOHM Modem is not working properly (lights are coming on but I cannot connect). What do I do?

● Your modem may not be receiving the proper voltage. Make sure you are using the power adapter that came with your modem. The correct adapter for the MAX-206M2 provides output power of 12V AC at 1 Amp.

● The *WiMAX Signal LED* should be illuminated if the modem is using default settings. If it is not illuminated, make sure the *Power LED* is green. If the *Power LED* is red, call *XOHM Care* at *877-333-XOHM* (9646).

● If neither of the *LAN LEDs* is illuminated:

  ■ Make sure that your computer or router has the Ethernet cable connected to the Ethernet port and that the cable is properly seated. (The cable should "click" when it is connected.)

  ■ Make sure the other end of the Ethernet cable is properly connected to the *LAN 1* or *LAN 2* port on the back of the XOHM Modem.

  ■ Ethernet cables usually have clips that help secure them to Ethernet ports. If these clips are damaged or broken, the cable could slip out. If your Ethernet cables or clips are damaged or broken, replace with a new cable.

  ■ If the cable is securely connected at both ends, but the corresponding *LAN 1* or *LAN 2* LED is still not illuminated, try using the other LAN port on the XOHM Modem.

  ■ The computer may have a faulty Ethernet adapter.

The lights on my XOHM Modem are on, but they are all red. What do I do?

● The LED indicators on the XOHM Modem should not be red if the modem is functioning properly.

● Red LEDs may indicate faulty configuration. Press and hold the red *Reset Button* on the back of the device for 10–15 seconds and then release the button to restore the factory default settings. The modem will power cycle (turn off and on) during the reset process.

● If the lights remain red after reset, call *XOHM Care* at *877-333-XOHM* (9646).

The lights on my XOHM Modem are on, but they are blinking. What do I do?

Blinking lights indicate that the modem is in a process. It may be powering up, searching for a WiMAX connection, or connecting to an attached computer. For an overview of the modem's LEDs, see "Modem LED Display (front panel)" on page 5.

If blinking persists and you are not able to connect with your XOHM Modem, call **XOHM Care** at **877-333-XOHM** (9646).

What do I do if my browser is not working properly?

The Web interface for the XOHM Modem (***http://192.168.100.1***) should be accessible to any computer connected to the modem. If you cannot display this page, you will not be able to reach any network device or the internet.

- First, check the LEDs on the modem and make sure the problem is not a basic or wired problem. (See earlier FAQs.)
- If you have other wired or wireless adapters (802.11a/b/g/n, Ethernet, cellular [3G laptop adapters]) connected to other networks at the same time, your computer may not be sending traffic to the XOHM Modem. If your computer has multiple network adapters, try disabling or removing all except the XOHM Modem connection.
- Make sure that the computer is set to obtain an IP address automatically using DHCP (Dynamic Host Control Protocol). These settings may vary by operating system. By default, you should obtain an IP address from the XOHM Modem starting at 192.168.100.33.
- If your computer cannot obtain an IP address from the XOHM Modem, you may try to set a static IP address on the computer to see if you can access the modem. If the modem is using default LAN settings, the IP address on the client computer will need to be 192.168.100.2–254, with a subnet mask of 255.255.255.0, and a gateway address of 192.168.100.1.
- If all else fails, reset the modem to factory defaults by pressing and holding the red **Reset Button** on the back of the device for 10 seconds.

Troubleshooting

- If the Reset option does not work, your XOHM Modem could have corrupted firmware. You may need to replace the modem. Call ***XOHM Care*** at ***877-333-XOHM*** (9646)

My XOHM Modem is broken. How do I replace it?

- First, try the ***Reset Button***. Press and hold the red ***Reset Button*** on the back of the device for 10 seconds and then release the button to restore the factory default settings. The modem will power cycle (turn off and on) during the reset process.
- If the Reset option does not work, please call ***XOHM Care*** at ***877-333-XOHM*** (9646).

How do I reset my XOHM Modem?

Press and hold the red ***Reset Button*** on the back of the device for 10–15 seconds and then release the button to restore the factory default settings. The modem will power cycle (turn off and on) during the reset process.

Router

I am having trouble getting my router to work with my XOHM Modem. What do I do?

If the XOHM Modem's lights are correct and you had successfully connected to the XOHM WiMAX network before attaching your modem, the problem is likely related to:

- How the router is attached to the XOHM Modem, or
- How your computer is communicating with your router.

To make sure your router is attached correctly to your XOHM Modem:

1. Check to make sure your router is plugged in and powered on.
2. Ensure the Ethernet cord connecting the router to the modem is securely attached.
3. Check to make sure the XOHM Modem's LAN light is illuminated green. See "Modem LED Display (front panel)" on page 5.

To make sure your computer is communicating with your router:

1. If your computer is connected via an Ethernet cord, ensure the cord is securely attached both to the router and your computer.

2. If your computer is connecting via Wi-Fi, ensure you have the correct Wi-Fi settings entered. You may want to try to connect your computer to the router using an Ethernet cord first.

3. If you need assistance with the above, please consult your wireless router's instructions, since routers vary by manufacturer and model.

If you are still having trouble connecting, you can try to connect to the XOHM network again without your router by connecting your computer directly to your XOHM Modem. If this is successful, please consult your wireless router's support options.

General

Can I use my XOHM Modem with more than one computer? Will that impact the quality of the service I am receiving?

With XOHM, you can connect to the Internet in more than one location, and extend your service to multiple users throughout your location. You can connect up to two computers directly to the two Ethernet ports of the XOHM Modem, or you can attach a standard Wi-Fi router to one of the Ethernet ports to create a wireless local area network. Wi-Fi-enabled computers can connect to the modem over the Wi-Fi connection. The use of more than one computer will not impact the speed of your connection. Each user will be able to connect at the same speed.

Why does my XOHM WiMAX signal vary?

Interference due to materials between the cell tower and the modem, including buildings and trees, could cause the signal to be weak in specific areas, even within the coverage area.

How do I receive the strongest signal possible?

Use the signal strength LEDs on the modem to find the room or location with the strongest signal. For more information about finding a location for your XOHM Modem, see "Positioning Your Modem" on page 6.

User Information and Warranty

Important User Information

Regulatory Notices

The design of the ZyXEL MAX-206M2 Modem complies with U.S. Federal Communications Commission (FCC) guidelines respecting safety levels of radio frequency (RF) exposure for portable devices, which in turn are consistent with the following safety standards previously set by U.S. and international standards bodies:

- *ANSI / IEEE C95.1-1999*, IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHZ to 300 GHz

- *National Council on Radiation Protection and Measurements (NCRP) Report 86, 1986*, Biological Effects and Exposure Criteria for Radio Frequency Electromagnetic Fields

- *International Commission on Non-Ionising Radiation Protection (ICNIRP) 1998*, Guidelines for limiting exposure to time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz)

FCC ID: I88MAX206M2

Caution: The ZyXEL MAX-206M2 Modem has been tested for compliance with FCC RF exposure limits. The ZyXEL MAX-206M2 Modem should not be used with external antennas that are not approved for use with this device. Use of this device in any other configuration may exceed the FCC RF exposure compliance limits.

This device has been tested and found to comply with the FCC limits for a Class B computing device peripheral, in accordance with the FCC's Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

The antennas must be installed to provide a separation distance of at least 20cm from all persons to satisfy FCC RF exposure compliance.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. There is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

● Reorient or relocate the receiving antenna
● Increase the separation between the equipment and receiver
● Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
● Consult the dealer or an experienced radio or television technician for help

This device complies with Part 15 of the FCC's Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and

2. This device must accept any interference received, including interference that may cause undesirable operation.

Caution: Any changes or modifications not expressly approved by XOHM could void the user's authority to use the equipment.

If you have purchased this product under a United States Government contract, it shall be subject to restrictions as set forth in subparagraph (c)(1)(ii) of Defense Federal Acquisitions Regulations (DFARs) Section 252.227-7013 for Department of Defense contracts, and as set forth in Federal Acquisitions Regulations (FARs) Section 52.227-19 for civilian agency contracts or any successor regulations. If further government regulations apply, it is your responsibility to ensure compliance with such regulations.

Important Notice

Because of the nature of wireless communications, transmission and reception of data can never be guaranteed. Data may be delayed, corrupted (i.e., have errors) or be totally lost. Although significant delays or losses of data are rare when wireless devices such as the ZyXEL MAX-206M2 Modems are used in a normal manner, they should not be used in situations where failure to transmit or receive data could result in damage of any kind to the user or any other party, including but not limited to personal injury, death, or loss of property. User accepts responsibility for damages of any kind resulting from delays or errors in data transmitted or received using the ZyXEL MAX-206M2 Modem, or for failure of the ZyXEL MAX-206M2 Modem to transmit or receive such data.

General Precautions

- Do not operate the ZyXEL MAX-206M2 Modem in areas where blasting is in progress, where explosive atmospheres may be present, near medical equipment, life support equipment, or any equipment which may be susceptible to any form of radio interference. In such areas, the ZyXEL MAX-206M2 Modem MUST BE POWERED OFF. It can transmit signals that could interfere with this equipment.

- Do not operate the ZyXEL MAX-206M2 Modem in any aircraft, whether the aircraft is on the ground or in flight. In aircraft, the ZyXEL MAX-206M2 Modem MUST BE POWERED OFF. When operating, it can transmit signals that could interfere with various onboard systems.

- The driver or operator of any vehicle should not operate the ZyXEL MAX-206M2 Modem while in control of a vehicle. Doing so will detract from the driver or operator's control and operation of that vehicle. In some jurisdictions, operating such communications devices while in control of a vehicle is an offense.

Technical Specifications

Environmental Specifications

Operating Temperature	0°C – 55°C
Storage Temperature	-30°C – 85°C
Humidity	5% to 90% (non-condensing)
Drop	75cm drop, no damage – fully operational

Mechanical Specifications

Dimensions (W x D x H)	160mm x 118mm x 167mm
Weight	480g
Battery Pack	n/a
LED	Yes (see table below)
Antenna	Internal 5dBi omnidirectional (MIMO)

LED table

Interface	Status	LED Color
Power	ON	Solid Green
	Power input low (Battery)	Yellow
	Modem Error	Red
	OFF	OFF (no light)

Interface	Status	LED Color
LAN	Not Connected	OFF (no light)
	10 or 100Mbps (Ethernet)	Solid Green
	Activity	Stay Solid Green
VoIP 1 & VoIP 2	When the phone port's defined SIP account for outgoing calls is registered	Solid Green
	When the voice port is off-hook	Flashing Green (slow)
	When the phone port's defined SIP account for outgoing calls is registered and there is a voice message in the SIP account	Solid Yellow
	When the voice port is off-hook and there is a voice message in the SIP account	Flashing Yellow
	No registered SIP accounts or device power OFF	OFF (no light)
WAN	Signal Strength: RSSI (Power level reception) 0 LED: > 90dBm 1 LED: </= -90dBm - > 80dBm 2LED: </= -80dBm - > 70dBm 3LED: </= -70dBm	Green LED ON indicates signal strength level
	LINK: WiMAX connection current Searching for a channel WiMAX network entry in progress (data being transferred)	Solid Green Flashing Green (slow) Flashing Green (fast)

Software Specifications

WiMAX Standard	IEEE 802.16e-2005
PRL (preferred roaming list)	support
Authentication	EAP-TLS, EAP-TTLS
Mobile IP	support

Transmitter Specifications

Normal Output Power	33dBm
TX Max Power	33dBm
Frequency Range	2.5GHZ – 2.7GHz
Bandwidth	5M, 10M
Modulation Method	QPSK, 16QAM, 64QAM

Receiver Specifications

Frequency Range	2.5GHZ – 2.7GHz
Bandwidth	5M, 10M
Modulation Method	QPSK, 16QAM, 64QAM
Receiver Sensitivity	-99dBm at QPSK

Hardware Specifications

Interface Type	Ethernet and VoIP
Common Air Interface	WiMAX
Channel Spacing	250 KHz
Supply Voltage	12 V DC
Communication Ports	2 Ethernet
Voice Capability	2 VoIP

Manufacturer's Warranty

ZyXEL warranty

With the following warranty, ZyXEL guarantees that this product will be free from any defects due to inferior materials or workmanship, for a period of up to one (1) year from the date of purchase. During the warranty period, should the product prove defective in workmanship and/or materials, ZyXEL will repair the product and/or replace the defective components or the defective product without charge on following terms:

Terms

1. This warranty is valid upon shipment of product as recorded by serial number out of ZyXEL's warehouse.

2. This warranty does not award any right to compensation or cover of losses inflicted due to any alteration of the product for the purpose of matching it with national or local standards and safety regulations enforced in any country other than the country where the product was first purchased, without ZyXEL's prior written permission.

3. This warranty will not apply if the product model or serial number has been defaced, modified, removed or is illegible.

4. This warranty does not cover:

   4.1 Any adaptation and/or modification for the purpose of improvement and enhancement of the product's usual range of application as described in the user guide without ZyXEL prior written permission.

   4.2 Damages due to:

   a) Misuse, including but not limited to: (1) use of the product for the purpose other that that it is deigned for, or failure to follow ZyXEL user guide, and (2) product installation or operation in conditions other than specified by the standards and safety regulations enforced in the country of operation;

   b) Repair by anyone except for ZyXEL RMA center or dealers;

   c) Accident, lightning, water, fire, improper ventilation and other causes that does not come under ZyXEL control;

   d) Shipment except for those cases when its carried out by ZyXEL's RMA center;

   e) Defects of the system in which the product was operated.

5. This warranty does not infringe upon customer's legal rights given to him by the laws currently enforced in his country as well as consumer's rights toward the dealer arising from the sale contract.

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